Introduction

A precise description of the developmental anatomy of the facial nerve and associated ear structures, augmented by an appreciation of phylogenic history, has proven extremely helpful intraoperatively. Predictions of facial nerve position can be made with reasonable accuracy when they are based on a proper analysis of developmental anomalies of other ear structures. In cases in which the facial nerve canal has not developed, it may be impossible to obtain accurate localization of the facial nerve radiographically prior to surgery. In such cases, judgment based on an understanding of embryology may be the surgeon's only guide to the position of the facial nerve ***(selber and Jesse, 2003)***.

Today the cornerstone of medical and surgical treatment of disease is a solid understanding of relevant anatomy and physiology. Nowhere is this more true than with the facial nerve. From idiopathic palsy to temporal bone fractures, from chronic otitis media to cerebellopontine angle (CPA) tumors, from cerebrovascular accidents to parotid tumors there are numerous pathologic conditions whose diagnosis and treatment require a clinical understanding of normal anatomy and physiology ***(LaRouere and Lundy, 2005).***

Understanding embryology allows otologic surgery to be planned with reasonable accuracy and carried out safely and expeditiously ***(selber and Jesse, 2003).***

Little was known about facial nerve anatomy until 1550 when Gabriel Fallopius identified the anatomic course of the facial nerve within the temporal bone and recognized the chorda tympani nerve as a branch of the facial nerve ***(Bolz et al., 1986).***

Confusion concerning sensation and motor function of the face continued until 1829 when Charles Bell properly attributed sensory innervation to the fifth cranial nerve and motor innervation to the seventh cranial nerve ***(Glasscock and Shambaugh, 1990).***